

CLAIM AMENDMENTS

1. (currently amended) A cell culture chamber [(20)] for a closed cell culture system serving to continuously supply different cells with liquid nutrient media, growth factors, and gases and the like, characterized by the fact that the cell culture chamber (20) ~~is materially composed of the following components~~ comprising:

[[a)] a membrane plate [(1)] with a membrane [(2)] serving to accommodate at least one cell culture and equipped with a number of channels passages (4, 4', 4'', 4''') for supplying liquid, gassing and sensor connection;

[[b)] a first transparent glass pane [(3)] which is placed on one side of the membrane plate (1) ~~while provided~~; means on the one side for observing the inside of the cell culture chamber [(20)] from the side mentioned above; [[and]]

[[c)] a cover plate [(5)] which is placed on the opposite side of the membrane plate [(1)] and which is provided with an incorporated, second transparent glass pane [(6)]; and means on the opposite side for illuminating the inside of the cell culture chamber [(20)] from this opposite side through the second pane ~~with the aid of an assigned lighting system~~.

2. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that~~ wherein the first transparent glass pane [(3)] is fixed on the membrane plate [(1)] in the area of the underside of the membrane plate [(1)] for the purpose of observing the inside of the cell culture chamber [(20)].

3. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that~~ wherein the cover plate [(5)] forms a cell culture chamber cap with a ~~securely integrated~~ the second transparent glass pane [(6)], such cell culture chamber cap being fixed in a releasable manner on the upper side of the membrane plate [(1)].

4. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that~~ wherein the cell culture chamber cap [(5)] as well as the underside of the membrane plate ~~{1}~~ show are formed with an opening for the accommodation and fixation of the respective glass panes ~~{6 resp. 3}~~.

5. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that~~ wherein the glass panes ~~{6, 3}~~ is a are sapphire glass panes.

6. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that further comprising~~, for the fixation of the membrane $[(2)]$ on the membrane plate $[(1)]$;

a retaining ring (7) ~~is provided, which that~~ can, with the aid of the cell culture chamber cap $[(5)]$, be pressed on the periphery of the membrane $[(2)]$ so that the latter can be fixed.

7. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that further comprising~~, on the side of the cell culture chamber cap $[(5)]$ facing the membrane plate $[(1)]$;

a joint ring (8) ~~is provided, by which that aseptically closes~~ the cell culture prepared on the membrane (2) ~~is aseptically closed~~ when the cell culture chamber $[(20)]$ is closed.

8. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that further comprising~~

means for supplying a constant, continuous gassing is ~~enabled by means of via~~ a suitable compartmentalization of the cell culture chamber $[(20)]$ via the respectively assigned channels passages (4', 4''') with freely selectable concentrations of the most various gases.

9. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that further comprising, for fixing~~ the membrane plate (1) ~~can be fixed~~ at its side opposite the cell culture chamber cap, (5) on an assigned retainer plate [(10)] for integration in the cell culture system, this retaining plate [(10)] being equipped with an integrated heating heater for the cell culture chamber [(20)].

10. (currently amended) The cell culture chamber according to claim 9, ~~characterized by the fact that wherein~~ the heating heater is an electrical heating heater.

11. (currently amended) The cell culture chamber according to claim 1, ~~characterized by the fact that wherein~~ the membrane [(2)] is a gas-permeable biofoil.